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Notice of Allowability	Application No.	Applicant(s)	
	10/676,983	LI ET AL.	
	Examiner	Art Unit	
	Lan Vinh	1765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed on 12/13/2005.
2. ☒ The allowed claim(s) is/are 1-4, 7-12, 14-16 and 18.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. <input type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. 7. <input type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____. |
|---|--|

Lan Vinh
 AU 1765



DETAILED ACTION

Allowable Subject Matter

1. Claims 1-4, 7-12, 14-16, 18 allowed

The following is an examiner's statement of reasons for allowance:

Regarding claim 1, the cited prior art of record fails to disclose or suggest a method for selective etching a metal oxide layer comprises the step of patterning and selectively etching the metal thin film without substantially over etching into an adjacent oxide layer, including etching the metal thin film using BCl and Cl gas in an etching chamber, wherein the etching chamber pressure is maintained at a pressure of about 6 mTorr, and wherein BCl is delivered at a flow rate of about 30 sccm and Cl is delivered at a flow rate of about 60 sccm, in combination with the rest of the steps/limitations of claim 1. Regarding claim 9, the cited prior art of record fails to disclose or suggest a method for selective etching a metal oxide layer comprises the step of selectively etching the metal thin film without substantially over etching into an adjacent oxide layer including etching the metal thin film using BCl and Cl gas in an etching chamber, including providing a T_{cp} RF of about 350 W at a Bias RF of about 150 W at a pressure of about 6 torr, in combination with the rest of the steps/limitations of claim 9. Regarding claim 15, the cited prior art of record fails to disclose or suggest a method for selective etching a metal oxide layer comprises the step of selectively etching the metal thin film without substantially over etching into an adjacent oxide layer includes etching the exposed metal thin film with etching chemicals consisting of BCl, delivered at a flow-rate of between about 10 sccm to 60 sccm, and Cl with a flow rate of between about 20

sccm to 10.0 sccm, wherein the volume of CI is twice that of BC1, and generating a TCP RF plasma of about 350 W and a Bias RF plasma of about 150 W. while maintaining the backward plasma less than 1 %, in combination with the rest of the steps/limitations of claim 15.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan Vinh whose telephone number is 571 272 1471. The examiner can normally be reached on M-F 8:30-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on 571 272 1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1765

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be 'LV' followed by a stylized flourish.

LV
February 1, 2006